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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,279	11/23/2001	Hyung-Ki Hong	8733.545.00	2426

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EXAMINER

SEFER, AHMED N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/990,279	Applicant(s) HONG, HYUNG-KI	
	Examiner A. Sefer	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) 9-22 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/24/2005 has been entered.

Response to Arguments

2. Applicant's arguments filed 11/30/2004 have been fully considered but they are not persuasive, since Takabayashi et al. ("Takabayashi") JP 2000-111871 discloses a liquid crystal panel having a liquid crystal layer sandwiched between an upper and lower substrates; a backlight 2 for irradiating light and having three color light sources; and an image signal processor 4/6 controlling a sequential lighting order and combination of the three color light sources (see figs. 1, 4 and page 5, par. 0042). Examiner would also like Applicant to refer to Paper No. 20050215 -- Examiner will provide full translation (full translation will be provided as soon as it is received from translations) and Applicants proposed to amend claim 1 to further clarify the lighting order and combination of the three color light sources.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Takabayashi.

Takabayashi discloses (see figs. 1 and 4 and page 4 of machine translated document) a field sequential liquid crystal display device, comprising: a liquid crystal panel 1 having an upper/a lower substrate (not shown) and a liquid crystal layer therebetween; a backlight device 2 under the liquid crystal panel for irradiating light to the liquid crystal panel and having three color light sources having one of colors Red, Green and Blue (as in claim 3); and an image signal processor 4/6 controlling a sequential lighting order and combination of the three color light sources, wherein said image processor said combination and lighting order in relation to a timing frame, and wherein said frame is divided into subframes.

As for claim 4, Takabayashi discloses (pages 4 and 5 of machine translated document) the image signal processor changes the lighting order and combination of the three color light sources depending on image characteristics displayed in the liquid crystal panel.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takabayashi in view of Uchida et al. ("Uchida") (EP 875 880).

Takabayashi discloses the device structure as recited in the claim, but does not disclose three color light sources being sequentially lit for up.

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Uchida discloses (col. 1, lines 45-55) three color light sources being sequentially lit for up to about [fraction (1/180)] of a second during three subframes, and wherein one frame period is approximately [fraction (1/60)] of a second; wherein a lighting time of each of the light sources at each subframe is less than [fraction (1/180)] second (as in claim 8).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Uchida's teachings with Takabayashi's device since that would since that would minimize flicker as taught by Uchida.

As for claim 2, Uchida discloses (abstract) each of the three color light sources has one of colors Cyan, Magenta and Yellow (full color display).

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takabayashi in view of Makino et al. ("Makino") USPN 6,570,554.

Takabayashi discloses the device structure as recited in the claim, but does not disclose Optical Compensated Birefringent.

Makino discloses (col. 2, lines 45-55) liquid crystal layer being Optical Compensated Birefringent (antiferroelectric liquid crystal) mode or Ferroelectric Liquid Crystal (FLC) mode (as in claim 6).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Makino's teachings with Takabayashi's device since that would since that would provide a wide viewing angle as taught by Makino.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS
May 13, 2005

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

